BASIS FOR THE AMENDMENT

Claim 4 has been canceled and the limitations of Claim 4 were included in Claims 23 and 24. Consequently, Claims 8, 12, 16, 20, 29 and 31 were canceled as well.

Claims 36 and 37 have been added as supported at page 7, lines 4-7 of the specification as originally filed.

No new matter is believed to have been added by entry of this amendment. Entry and favorable reconsideration are respectfully requested.

Upon entry of this amendment Claims 2, 3, 5-7, 9-11, 13-15, 17-19, 23 and 24, 27, 28, 30, 32-35 will now be active in this application. Claims 5-8 and 13-16 stand withdrawn from consideration.

REMARKS

Applicants respectfully request reconsideration of the application, as amended, in view of the following remarks.

The only independent claims are Claims 23 and 24. Claim 9-12 and 17-20 depend indirectly on independent Claim 23.

Regarding Claim 5, the Examiners' attention is drawn to lines 3 and 4 of Claim 5:

"applying a water jet of 30 kg/cm^2 or more to a web that contains

the fibers of **claim 23**, or".

Thus, Claim 5 depends on Claim 23. Claims 9-12 depend directly on Claim 5 and indirectly on Claim 23.

Regarding Claim 13, the Examiners' attention is drawn to line 4 of Claim 13:

"contains the fibers of **claim 23** as a part of the fibrous component thereof, to thereby fibrillate".

Thus, Claim 13 depends on Claim 23. Claims 17-19 depend directly on Claim 13 and indirectly on Claim 23.

The dependent claims include all limitations of the independent claims. If the independent claims are not rejected as anticipated by Toray, the dependent claims can consequently not be anticpated by Toray.

Since Claim 9-12 depend indirectly on independent Claim 23 and Claim 23 was not rejected as being anticipated by Toray, it is believed that the rejection of Claims 9-11 as being anticipated over Toray was issued in error. Similarly, Claims 17-19 depend indirectly

on Claim 23 and it is believed that the rejection of Claims 9-11 as being anticipated over Toray was issued in error. The dependent claims cannot be anticipated if the independent claim is not anticipated. Thus, this rejection should be withdrawn.

Similarly, the rejections of the dependent claims over Toray and Ohmory and Toray, Ohmory and Howard should be withdrawn as the independent claims 23 and 24 were rejected over Toray and Ueda and not over Toray and Ohmory and Toray, Ohmory and Howard.

In independent Claims 23 and 24 the fibers consist of polyvinyl alcohol and from 0.01 to 30 % by mass of **a layered compound** having a mean particle size of from 0.01 to 30 μm.

New Claims 36 and 37 further define the layered compound as smectite, montmorillonite or mica.

The advantages associated with using a layered compound as claimed is disclosed in the specification as follows.

The specification discloses at page 3, last paragraph:

"The present inventors have assiduously studied and, as a result, have found that, when PVA fibers are processed to have an extremely flattened cross-sectional profile, then the fibers can be readily fibrillated even though any foreign polymer as in the related art is not added thereto. In addition, the present inventors have further found that, **when a layered compound is added thereto, the cross-sectional profile of the fibers may be much more flattened**. The present inventors also found that the flattened PVA fibers of the present invention can be fibrillated without compromising their physical properties such as chemical resistance, hydrophilicity, weather resistance and tenacity."

The specification discloses at page 7, lines 4-24:

"Along with the PVA resin as above, the PVA fibers of the present invention may **contain a layered compound** added thereto. Containing a **layered compound**, the fibers could be more readily split. The layered compound is, for example, smectite, montmorillonite or mica. It may be a natural product or a synthetic product. However, in order to be able to add the compound to the spinning solution for the fibers, the mean particle size of the **compound** preferably falls between 0.01 and 30 μm. The mean particle size includes all values and subvalues therebetween, especially including 0.05, 0.1, 0.5, 1, 5, 10, 15, 20 and 25μm. If the mean particle size thereof is larger than 30 μm, then the compound may clog spinning nozzles and filters and would interfere with good spinning operation. On the other hand, if the mean particle size thereof is smaller than 0.01 μm, the layered compound particles would aggregate and, as a result, the resulting secondary particles would be larger than tens μm and would clog spinning nozzles and filters, therefore interfering with good spinning operation. More preferably, the mean particle size of the compound is from 0.1 to 10 μm. The amount of the layered compound to be added to the fibers is preferably from 0.01 to 30 % by mass of the fibers. The amount of layered compound to be added to the fibers includes all values and subvalues therebetween, especially including 0.05, 0.1, 0.5, 1, 5, 10, 15, 20 and 25% by mass. If the amount is smaller than 0.01 % by mass, then the compound would be ineffective for improving the splittability of the fibers. On the contrary, if the amount is larger than 30 % by mass, then the spinning nozzle stability would be poor and, in addition, the physical properties of the fibers produced would significantly worsen. More preferably, the amount is from 0.1 to 10 % by mass."

The specification discloses at page 15, lines 1-11:

"The PVA fibers of the present invention may be readily split into single fibers, when having received shear force applied thereto. They can be readily fibrillated without compromising the physical properties such as the chemical resistance, the hydrophilicity the weather resistance and the tenacity thereof. The fibrillated fibers may be formed into dry-process or wet-process nonwoven fabrics. In addition, the dry-process and wet-process nonwoven fabrics formed of the fibrillated fibers of the present invention are superior to those formed of conventional fibrillated fibers in point of the water absorbability and the wiping potency thereof. Further, when the fibrillated PVA fibers of the present invention are

sheeted along with a cement slurry, then they may form wet-process slates. When the fibers of the present invention are kneaded with plastic or rubber, then they may form plastic or rubber products reinforced with the fibrillated PVA fibers."

While based on the Examples of Toray (JP49-100327), the present application and Toray are overlapping in terms flattness ratio ($10 \leqq L/D \leqq 50$) and thickness ($0.4 \leqq D \leqq 5$).

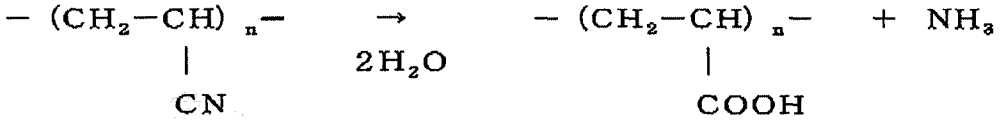
However, when PVA alone is used, even if above parameters are satisfied, the fiber will not fibrillate. Thus, in one embodiment of the present invention, a layered compound is used in order to achieve fibrillation.

In contrast, Toray has a heterogeneous polymer blend approach to achieve fibrillation.

An advantage of the present application is the superior chemical resistance (especially, alkaline resistance) compared to Toray.

In contrast, in Toray, a blend of polyvinyl alcohol, polyacrylonitrile and acrylonitrile vinyl alcohol graft copolymer is dissolved in a solvent and spun and drawn to give fibers. Thus, the claimed polyvinyl alcohol fibers of the present invention cannot be anticipated by the fibers containing a polymer blend as disclosed in Toray.

Toray discloses the use of acrylonitrile which is detrimental to the hydrolysis resistance of the fibers of Toray.



However, the **claimed fibers** of the present invention are **hydrolysis resistant** and **hydrolysis as in the fibers of Toray does not occur**.

Further, acrylonitrile is excluded from Claims 23 and 24 due to the use of "consisting of". Since **Toray** uses acrylonitrile, it teaches away from the use of hydrolysis resistant fibers. Moreover, **Ueda** discloses the use of **water-soluble** PVA fibers. Note that **Ueda** discloses **underwater disintegrable fiber materials**. See, for example, col. 1, lines 50 to col. 2, line 19. Thus, even the combination of **Ueda** with **Toray** cannot result in or render obvious the present invention.

In addition, **new Claims 36 and 37** are not disclosed or suggested by the combination of **Ueda with Toray.**

Howard does not cure the defects of the combination of **Ueda** with **Toray**.

Howard adds fine particles to give wettability to polyolefin. However, there is no mention of a layered compound, in particular for the purpose of fibrillating the fibers in Howard.

Further, the examples in the specification show that excellent fibrillability, hydrophobicity, chemical resistance and wiping potency are obtained using the claimed fiber of the present invention. Table 1 below is copied from page 14 of the specification.

In support of the above argument Applicants previously provided JP 9059872 and a translation thereof (both filed by IDS). At page 7, paragraph [0049], Example 1, it is disclosed that acrylonitrile is hydrolyzed with sodium hydroxide. However, the Examples of the present invention show that the fibers of the present invention are resistant to sodium hydroxide. See Table 1 below "Chemical Resistance". The "dissolution" is measured after dipping in sodium hydroxide for 8 hours and is very small. (See page 10, lines 9-15 of the

specification for the experimental procedure for determining the dissolution in sodium hydroxide).

Thus, the fibers of the present invention have a good hydrolysis resistance and are different from the fibers of Toray and the fibers of Ueda or a combination thereof.

Table 1

	Cross-Sectional Profile	D (μm)	L/D	Fibrillability	Hydrophilicity		Chemical Resistance		Wiping Potency	
				Microscopic Observation	Water-Absorbing Speed (mm/5 min)	Result	Dissolution (%)	Result	Residue after Wiping (%)	Result
Example 1	flattened	3	15	good	124	good	<1	good	4.0	good
Example 2	flattened	3	21	good	128	good	<1	good	3.1	good
Example 3	flattened	3	25	good	123	good	<1	good	5.0	good
Comparative Example 1	flattened	3	4	not good	125	good	<1	good	14.8	not good
Comparative Example 2	cocoon-shaped	-	-	not good	111	good	<1	good	15.1	not good
Comparative Example 3	rounding	-	-	good	98	not good	19	not good	9.8	not good

As stated at page 15, 1st paragraph of the specification:

> The PVA fibers of the present invention may be readily split into single fibers, when having received shear force applied thereto. They can be readily fibrillated without compromising the physical properties such as the chemical resistance, the hydrophilicity the weather resistance and the tenacity thereof. The fibrillated fibers may be formed into dry-process or wet-process nonwoven fabrics. In addition, the dry-process and wet-process nonwoven fabrics formed of the fibrillated fibers of the present invention are superior to those formed of conventional fibrillated fibers in point of the water absorbability and the wiping potency thereof. Further, when the fibrillated PVA fibers of the present invention are sheeted along with a cement slurry, then they may form wet-process slates. When the fibers of the present invention are kneaded with plastic or rubber, then they may form plastic or rubber products reinforced with the fibrillated PVA fibers.

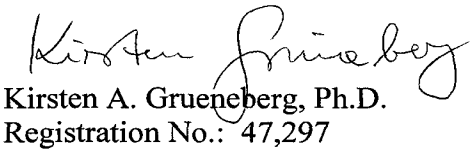
The excellent properties of the claimed PVA fibers having the claimed dimensions is not disclosed or suggested in Toray and Ueda and Howard.

Therefore, the rejection of the claims over Toray and Ueda and Howard are believed to be unsustainable as the present invention is neither anticipated nor obvious and withdrawal of this rejection is respectfully requested.

This application presents allowable subject matter, and the Examiner is kindly requested to pass it to issue. Should the Examiner have any questions regarding the claims or otherwise wish to discuss this case, he is kindly invited to contact Applicants' below-signed representative, who would be happy to provide any assistance deemed necessary in speeding this application to allowance.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



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